

ABSTRACT OF THE DISCLOSURE

A loudspeaker system comprising a closed cabinet containing a tuned port, an electromechanical driver, an
5 acoustic radial transmission line (VARTL), a reactive alternate density transmission medium (ADTM) load and a radial right angle wave guide (RRAWG). The VARTL is disposed around and in front of the cone of the driver so as to isolate the driver from reflected signals it produces, while
10 simultaneously allowing the driver to remain inert to the reflected signals, acoustic summation or stimulus. The ADTM slows the speed of the wave, thereby causing delay and intentional attenuation of the initial waveform while, by way of radial expansion, allows the proper exit velocity. This
15 system allows the cone to drive the port air mass and the VARTL air mass with essentially equal pressure on each cycle throughout the frequency range of the VARTL and substantially reduces mechanical vibrations in the cabinet by effecting balanced pressures.